

# **LITTER DRY STACK STRUCTURE** **DESIGN WORKSHEET** **(THREE WALLS – ONE END OPEN)**

Conservation District: \_\_\_\_\_ Field Office: \_\_\_\_\_

Cooperator: \_\_\_\_\_ Location: \_\_\_\_\_

$V_L$  = Volume of litter stored (Form GA-ENG-313A, Item "Operation Storage Requirement."): \_\_\_\_\_  $\text{ft}^3$

$W_b$  = Width of building (dimension from inside of post to inside of post): \_\_\_\_\_ ft.

$h_m$  = Max height of pile (Max. 7 ft.): \_\_\_\_\_ ft.

$h_w$  = Height of wall (Max for wooden wall = 5 ft): \_\_\_\_\_ ft.

$h_s$  = Height of pile at side walls (Normally equal to the wall height): \_\_\_\_\_ ft.

$h_e$  = Height to gable end closure wall (12 or 14 ft depending on design chosen): \_\_\_\_\_ ft.

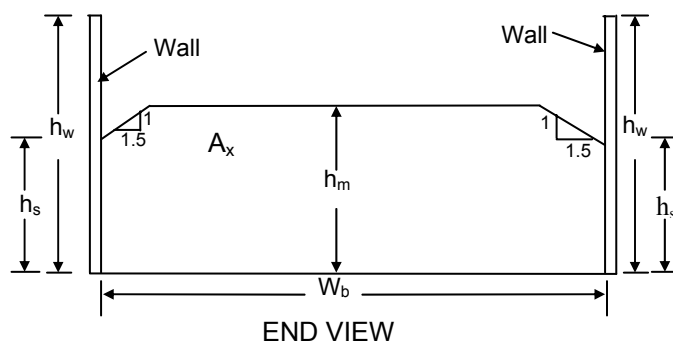
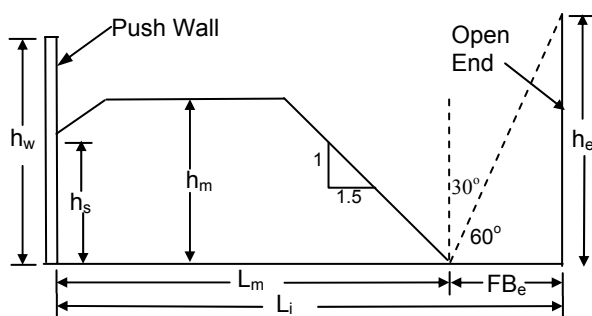
$A_x$  = Cross sectional area of pile (calculate below)

$L_m$  = Length of litter pile (calculate below)

$L_i$  = Length of building (initial calculation) including freeboard ( $FB_e$ ).

$L_T$  = Total length;  $L_i$  rounded to accommodate post spacing

$FB_e$  = Horizontal freeboard between toe of pile and open end of building. Recommend 30 degrees from the vertical on all exposed sides to prevent windblown rainfall from impacting on the containment area.



$$A_x = h_m W_b - 1.5(h_m - h_s)^2 = \text{_____} \times \text{_____} - [1.5 \times (\text{_____} - \text{_____})^2] = \text{_____} \text{ft}^2$$

$$FB_e = 7 \text{ ft for 12 ft high support posts OR } 8 \text{ ft for 14 ft high support posts} = \text{_____} \text{ft}$$

$$L_m = V_L / A_x + (0.75 \times h_m) = (\text{_____} / \text{_____}) + (0.75 \times \text{_____}) = \text{_____} \text{ft.}$$

$$L_i = L_m + FB_e = \text{_____} + \text{_____} = \text{_____} \text{ft.} \quad \text{Post Spacing: _____ ft. c-c}$$

$$L_T = \text{_____} \text{ft. (Round } L_i \text{ to accommodate post spacing. Round to closest even spacing.)}$$

$$\text{Floor area} = L_T \times W_b = \text{_____} \times \text{_____} = \text{_____} \text{ft}^2$$

Designed by: \_\_\_\_\_ Date: \_\_\_\_\_

Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_